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JAN 25 2006
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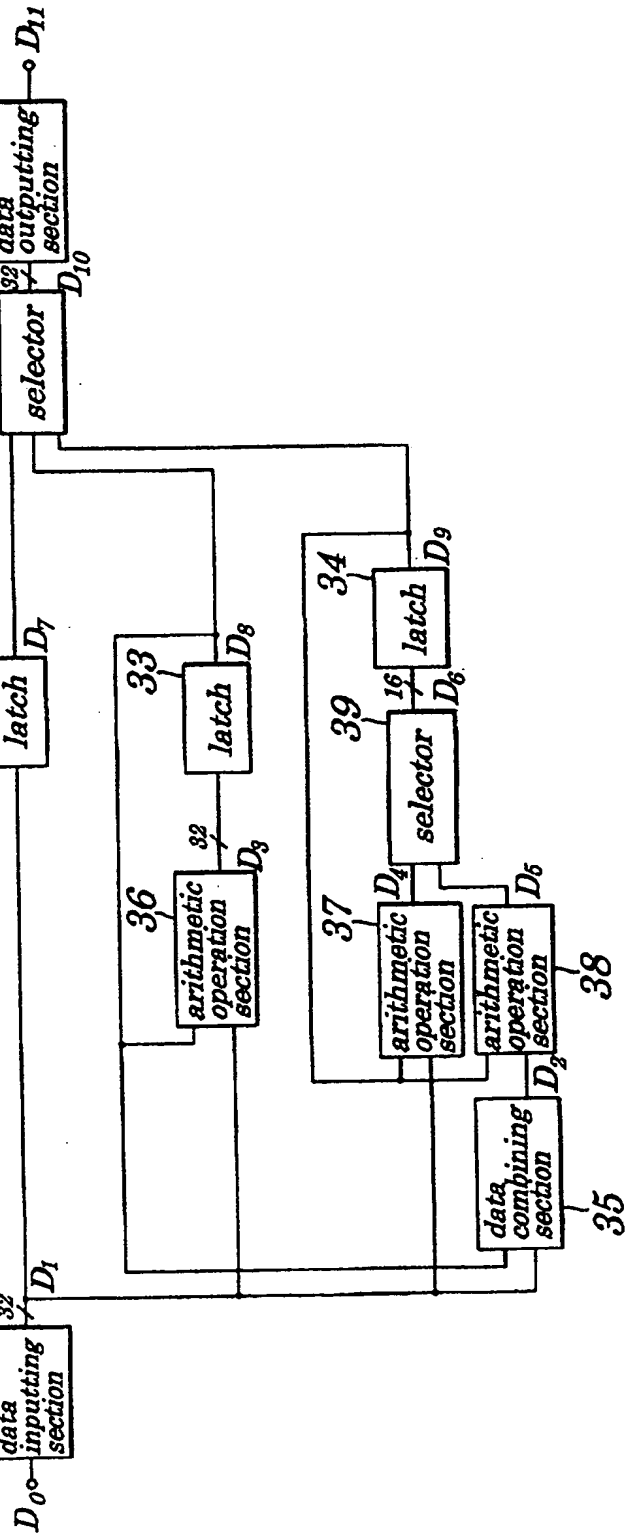

FIG.1

FIG.2

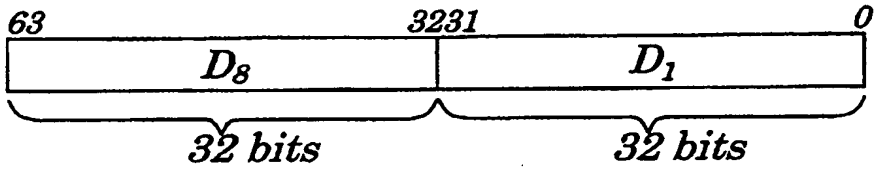

FIG.3

C15	Z01·Z03·Z04·Z07·Z08·Z10·Z11·Z12·Z13·Z15·R0·R02·R03·R04·R05·R06·R08·R11·R12·R13·R20·D00·D03·D04·D05·D06·D07·D10·D12·D14·D16·D17·D18·D19·D23·D25·D27·D29·D31
C14	Z00·Z02·Z03·Z06·Z07·Z09·Z10·Z11·Z12·Z14·Z15·R02·R08·R09·R12·R16·R22·R25·R27·R29·R31·D01·D02·D05·D07·D08·D10·D12·D13·D15·D16·D19·D23·D30
C13	Z01·Z02·Z05·Z06·Z08·Z09·Z10·Z11·Z13·Z14·Z15·R00·R01·R05·R07·R09·R10·R12·R13·R14·R15·D01·D02·D03·D04·D05·D08·D13·D14·D15·D16·D21·D22·D26·D27·D28·D30·D31
C12	Z00·Z01·Z04·Z05·Z07·Z08·Z09·Z10·Z12·Z13·Z14·Z15·R00·R01·R02·R03·R04·R08·R10·R13·R15·R21·R22·R23·R24·D01·D03·D07·D10·D14·D15·D17·D19·D21·D23·D24·D26·D28·D29
C11	Z00·Z01·Z06·Z09·Z10·Z14·R03·R04·R05·R07·R08·R11·R13·R15·R16·R18·R20·R22·R23·R25·R26·R27·R28·R29·R31·D00·D01·D03·D04·D06·D09·D10·D11·D13·D14·D17·D18·D23·D25·D27·D28·D30
C10	Z00·Z05·Z06·Z09·Z13·R00·R03·R04·R07·R09·R11·R12·R15·R17·R18·R25·R27·R29·R30·R31·D00·D01·D02·D07·D09·D14·D16·D21·D22·D24·D25·D26·D27·D30
C09	Z04·Z07·Z08·Z12·Z15·R02·R04·R06·R07·R12·R16·R20·R21·R22·R23·R25·R27·R30·R31·D03·D05·D07·D11·D13·D15·D18·D18·D21·D24·D25·D27·D29·D30
C08	Z03·Z06·Z07·Z11·Z14·Z15·R02·R08·R10·R11·R12·R13·R14·R16·R17·R18··R19·R21·R22·R24·R25·R27·R29·D01·D05·D07·D09·D14·D15·D16·D17·D19·D21·D23·D27·D28
C07	Z02·Z05·Z06·Z10·Z13·Z14·Z15·R00·R01·R02·R03·R04·R05·R06·R09·R10·R11·R12·R13·R15·R17·R20·R21·R22·R23·R26·R27·R30·R31·D05·D08·D09·D10·D11·D12·D14·D17·D18·D19·D22·D24·D26·D27·D31
C06	Z01·Z04·Z05·Z09·Z12·Z13·Z14·R07·R06·R10·R12·R14·R15·R19·R22·R27·R28·R29·R30·D00·D02·D03·D04·D06·D11·D13·D14·D16·D20·D22·D23·D25·D29
C05	Z00·Z03·Z04·Z08·Z11·Z12·Z13· R00·R03·R04·R05·R06·R09·R10·R14·R16·R18·R19·R20·R28·R29·R31· D00·D02·D04·D05·D07·D09·D17·D21·D23·D24·D26·D27·D28·D28·D30·D31
C04	Z02·Z03·Z07·Z10·Z11·Z12·Z15· R02·R06·R12·R14·R17·R18·R20·R22·R23·R28· D00·D02·D03·D04·D05·D10·D11·D12·D13·D14·D17·D18·D20·D23·D25·D26·D27·D29·D31
C03	Z01·Z02·Z06·Z09·Z10·Z11·Z14· R01·R02·R04·R06·R07·R08·R09·R13·R14·R15·R16·R21·R24·R26·R28· D04·D05·D06·D10·D14·D15·D16·D17·D18·D19·D20·D21·D22·D23·D24·D26·D28·D29·D30
C02	Z00·Z03·Z04·Z05·Z07·Z08·Z11·Z12·R01·R02·R03·R04·R05·R06·R08·R11·R13·R14·R15·R17·R19·R20·R23·R24·R26·R27·R28·R29·R30· D01·D04·D05·D07·D08·D14·D15·D16·D18·D19·D21·D22·D23·D26·D27·D28
C01	Z02·Z03·Z04·Z06·Z08·Z10·Z11·Z15· R00·R01·R02·R04·R07·R08·R11·R14·R15·R18·R20·R21·R22·R23·R25·R28·R30· D00·D01·D03·D05·D07·D08·D12·D16·D17·D19·D22·D23·D24·D26·D28·D31
C00	Z02·Z04·Z05·Z06·Z09·Z11·Z12·Z13·Z14· R01·R04·R05·R06·R09·R10·R13·R14·R19·R22·R24·R28·R31· D00·D01·D02·D04·D06·D09·D12·D13·D19·D20·D21·D25·D27·D29·D30·D31

FIG.4

C15	R01·R03·R04·R07·R08·R10·R11·R12·R13·R15·D00·D02·D03·D04·D05·D07·D08·D11·D12·D14·D18·D19·D20·D21·D23·D27·D30·D32·D33·D35·D36·D38·D41·D43·D44·D49·D51·D52·D56·D60
C14	R00·R02·R03·R06·R07·R09·R10·R11·R12·R14·R15·D00·D01·D03·D04·D05·D06·D08·D09·D12·D13·D15·D19·D20·D21·D22·D24·D28·D31·D33·D34·D36·D37·D39·D42·D44·D45·D50·D52·D53·D57·D61
C13	R01·R02·R05·R06·R08·R09·R10·R11·R13·R14·R15·D00·D01·D02·D04·D05·D06·D07·D09·D10·D13·D14·D18·D20·D21·D22·D23·D25·D29·D32·D34·D35·D37·D38·D40·D43·D45·D48·D51·D53·D54·D58·D62
C12	R00·R01·R04·R05·R07·R08·R09·R10·R12·R13·R14·R15·D00·D01·D02·D03·D05·D06·D07·D08·D10·D11·D14·D15·D17·D21·D22·D23·D24·D26·D30·D33·D35·D36·D38·D39·D41·D44·D46·D47·D52·D54·D55·D59·D63
C11	R00·R01·R06·R08·R10·R14·D01·D05·D06·D09·D14·D15·D16·D19·D20·D21·D22·D24·D30·D31·D32·D33·D34·D35·D37·D38·D39·D40·D41·D42·D43·D44·D45·D47·D48·D49·D51·D52·D53·D55
C10	R00·R05·R08·R09·R13·D02·D06·D07·D10·D15·D16·D17·D20·D21·D22·D23·D25·D26·D31·D32·D33·D34·D35·D36·D38·D39·D40·D41·D42·D43·D44·D45·D46·D48·D49·D50·D52·D53·D54·D56
C09	R04·R07·R08·R12·R15·D00·D03·D07·D08·D11·D16·D17·D18·D21·D22·D23·D24·D26·D27·D32·D33·D34·D35·D36·D37·D39·D40·D41·D42·D43·D44·D45·D46·D47·D49·D50·D51·D53·D54·D55·D57
C08	R03·R06·R07·R11·R14·R15·D00·D01·D04·D06·D09·D12·D17·D18·D19·D22·D23·D24·D25·D27·D28·D33·D34·D35·D36·D37·D38·D40·D41·D42·D43·D44·D45·D46·D47·D48·D50·D51·D52·D54·D55·D56·D58
C07	R02·R05·R06·R10·R13·R14·R15·D00·D01·D02·D05·D09·D10·D13·D18·D19·D20·D23·D24·D25·D26·D28·D29·D34·D35·D36·D37·D38·D39·D41·D42·D43·D44·D45·D46·D47·D48·D49·D51·D52·D53·D55·D56·D57·D59
C06	R01·R04·R05·R09·R12·R13·R14·D01·D02·D03·D06·D10·D11·D14·D19·D20·D21·D24·D25·D26·D27·D29·D30·D35·D36·D37·D38·D39·D40·D42·D43·D44·D45·D46·D47·D48·D49·D50·D52·D53·D54·D56·D57·D58·D60
C05	R00·R03·R04·R06·R11·R12·R13·D02·D03·D04·D07·D11·D12·D15·D20·D21·D22·D25·D26·D27·D28·D30·D31·D36·D37·D38·D39·D40·D41·D43·D44·D45·D46·D47·D48·D49·D50·D51·D53·D54·D55·D57·D58·D59·D61
C04	R02·R03·R07·R10·R11·R12·R15·D00·D03·D04·D05·D08·D12·D13·D16·D21·D22·D23·D26·D27·D28·D29·D31·D32·D37·D38·D39·D40·D41·D42·D44·D45·D46·D47·D48·D49·D50·D51·D52·D54·D55·D56·D58·D59·D60·D62
C03	R01·R02·R06·R09·R10·R11·R14·D01·D04·D05·D06·D09·D13·D14·D17·D22·D23·D24·D27·D28·D29·D30·D32·D33·D38·D39·D40·D41·D42·D43·D45·D46·D47·D48·D49·D50·D51·D52·D53·D55·D56·D57·D59·D60·D61·D63
C02	R00·R03·R04·R05·R07·R09·R11·R12·D03·D04·D06·D08·D10·D11·D12·D15·D19·D20·D21·D24·D25·D27·D28·D29·D31·D32·D34·D35·D36·D38·D39·D40·D42·D46·D47·D48·D50·D53·D54·D57·D58·D61·D62
C01	R02·R03·R04·R06·R08·R10·R11·R15·D00·D04·D05·D07·D09·D11·D12·D13·D18·D20·D21·D22·D25·D26·D28·D29·D30·D32·D33·D35·D36·D37·D39·D40·D41·D43·D47·D48·D49·D51·D54·D55·D58·D59·D62·D63
C00	R02·R04·R05·R08·R09·R11·R12·R13·R14·D01·D02·D03·D04·D06·D07·D10·D11·D13·D17·D18·D19·D20·D22·D26·D29·D31·D32·D34·D35·D37·D40·D42·D43·D48·D50·D51·D55·D59·D63

FIG. 5

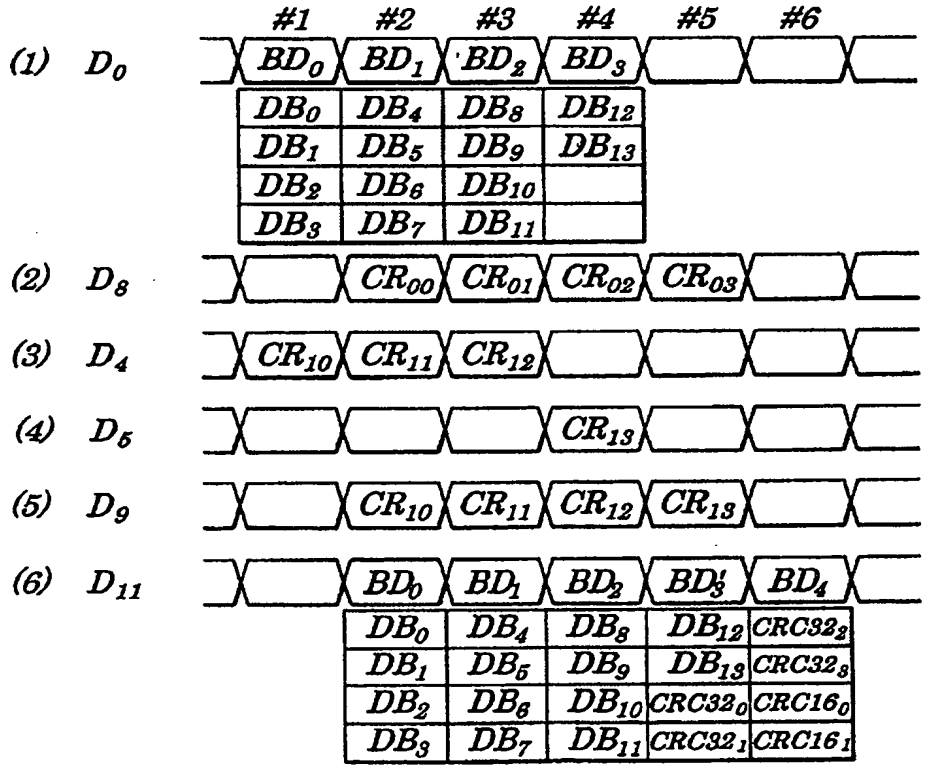
#1
#2
#3
#4
#5
#6
(1) D0
BD0 BD1 BD2 BD3
DB0 DB4 DB8 DB12
DB1 DB5 DB9 DB13
DB2 DB6 DB10
DB3 DB7 DB11
(2) D8
CR00 CR01 CR02 CR03
(3) D4
CR10 CR11 CR12
(4) D6
CR13
(5) D9
CR10 CR11 CR12 CR13
(6) D11
BD0 BD1 BD2 BD3' BD4
DB0 DB4 DB8 DB12 CRC32 2
DB1 DB5 DB9 DB13 CRC32 3
DB2 DB6 DB10 CRC32 0 CRC16 0
DB3 DB7 DB11 CRC32 1 CRC16 1

FIG.6

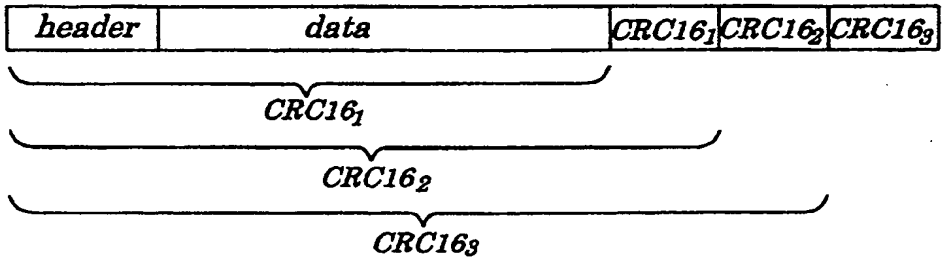
header
data
CRC16₁
CRC16₂
CRC16₃
CRC16₁
CRC16₂
CRC16₃

FIG.7

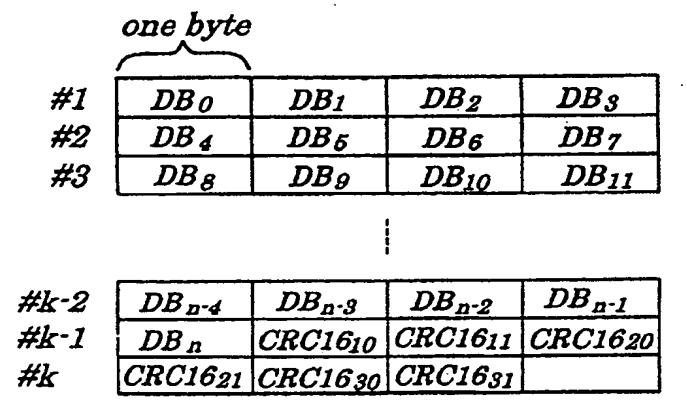
one byte
#1
#2
#3
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
#k-2
#k-1
#k
DBn-4
DBn-3
DBn-2
DBn-1
DBn
CRC1610
CRC1611
CRC1620
CRC1621
CRC1630
CRC1631

FIG.8

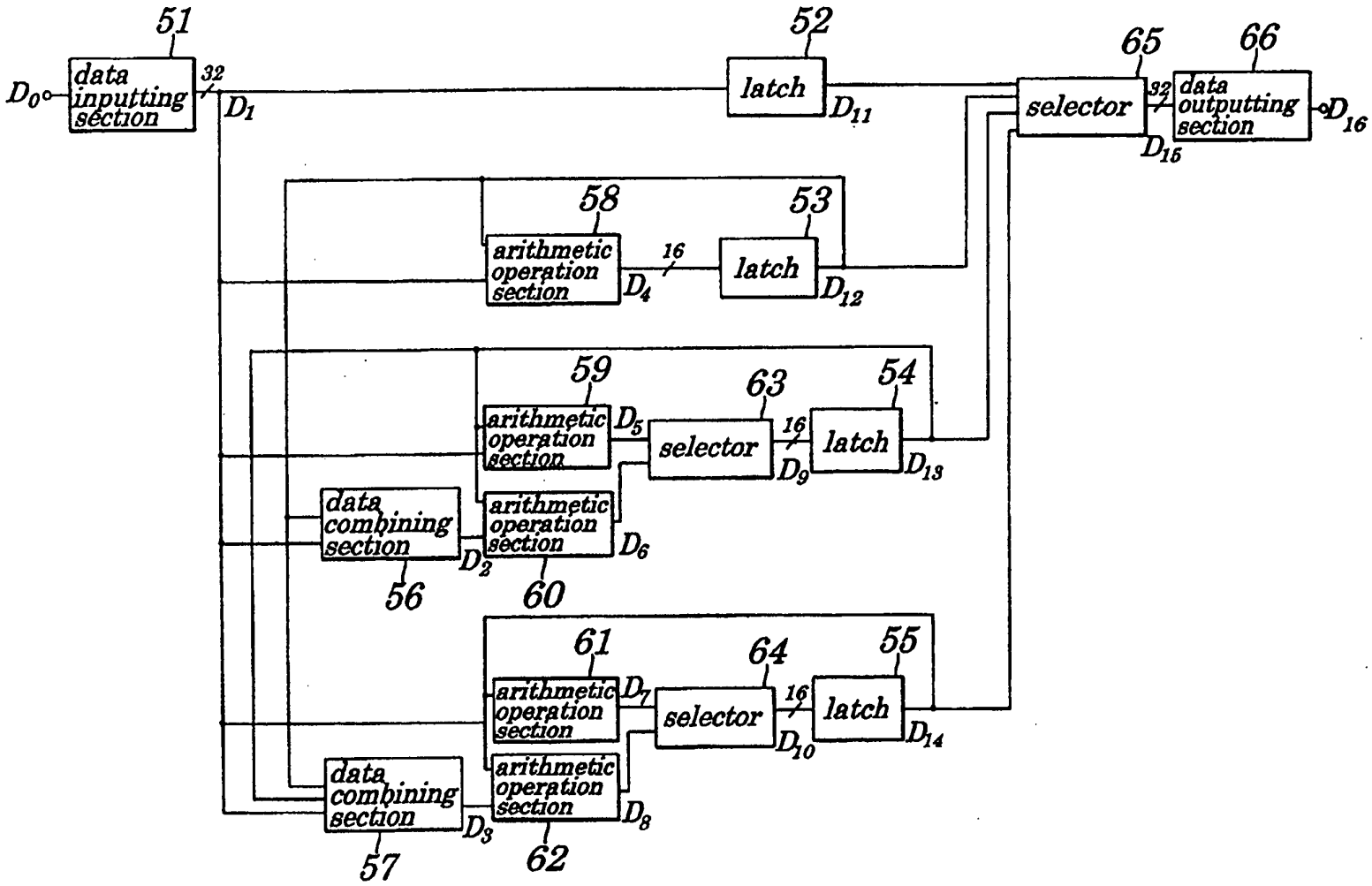
51
data inputting section
32
D_0
D_1
52
latch
D_{11}
65
selector
32
66
data outputting section
D_{16}
D_{15}
58
arithmetic operation section
16
D_4
53
latch
D_{12}
59
arithmetic operation section
D_5
63
selector
16
D_9
54
latch
D_{13}
data combining section
D_2
56
arithmetic operation section
D_6
60
61
arithmetic operation section
D_7
64
selector
16
D_{10}
55
latch
D_{14}
data combining section
D_3
57
arithmetic operation section
D_8
62

FIG.9

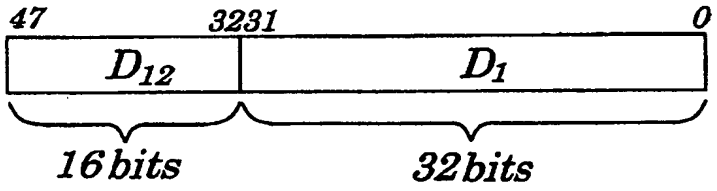
47
3231
0
D_{12}
D_1
16bits
32bits

FIG.10

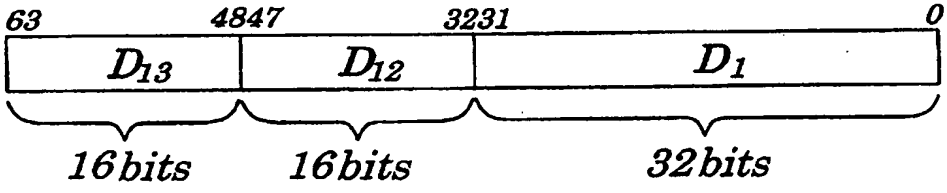
63
4847
3231
0
D_{13}
D_{12}
D_1
16bits
16bits
32bits

FIG.11

C15	Z01·Z04·Z06·Z10·Z11·Z12·Z13· R00·R02·R03·R04·R05·R06·R10·R11·R12·R13·R15· D00·D07·D09·D10·D12·D13·D14·D15·D16·D18·D19·D20·D21·D22·D23·D24·D26·D27· D28·D29·D31
C14	Z00·Z03·Z07·Z09·Z10·Z11·Z12· R01·R03·R04·R05·R06·R07·R11·R12·R13·R14· D01·D02·D05·D06·D09·D10·D11·D14·D15·D16·D18·D21·D22·D24·D25·D26·D29·D30
C13	Z02·Z06·Z08·Z09·Z10·Z11·Z15· R00·R02·R06·R08·R10·R14· D00·D01·D04·D08·D15·D16·D19·D27·D30·D31
C12	Z01·Z05·Z07·Z06·Z09·Z10·Z14· R01·R03·R07·R09·R11·R15· D00·D01·D04·D05·D07·D10·D12·D19·D21·D22·D25·D31
C11	Z00·Z01·Z06·Z07·Z09·Z10·Z11·Z12·Z15· R00·R03·R04·R06·R07·R08·R10·R11·R12· D00·D06·D07·D11·D12·D14·D16·D18·D19·D20·D23·D27·D28·D29
C10	Z00·Z05·Z06·Z08·Z09·Z10·Z11·Z14·Z15· R01·R04·R05·R07·R06·R09·R11·R12·R13· D00·D01·D02·D03·D05·D08·D09·D11·D14·D15·D17·D18·D21·D22·D26·D27·D28·D29
C09	Z04·Z05·Z07·Z08·Z09·Z10·Z13·Z14·Z15· R00·R02·R05·R06·R08·R09·R10·R12·R13·R14· D00·D03·D06·D09·D11·D13·D15·D16·D17·D21·D22·D25·D26·D27·D28·D30·D31
C08	Z03·Z04·Z06·Z07·Z08·Z09·Z12·Z13·Z14· R01·R03·R06·R07·R09·R10·R11·R13·R14·R15· D00·D03·D04·D05·D07·D11·D14·D20·D23·D24·D25·D26·D27·D29·D30·D31
C07	Z02·Z03·Z05·Z06·Z07·Z08·Z11·Z12·Z13· R02·R05·R08·R11·R13·R14· D01·D03·D08·D09·D12·D17·D18·D25·D26·D27·D28·D29·D30
C06	Z01·Z02·Z04·Z05·Z06·Z07·Z10·Z11·Z12· R03·R04·R05·R06·R07·R09·R10·R13·R14· D01·D02·D03·D04·D06·D12·D13·D14·D18·D24·D26·D28·D29
C05	Z00·Z01·Z03·Z04·Z05·Z08·Z09·Z10·Z11· R06·R08·R11·R12·R13·R14· D01·D02·D03·D05·D06·D07·D10·D11·D12·D14·D15·D16·D18·D24·D25·D26·D28
C04	Z00·Z02·Z03·Z04·Z05·Z08·Z09·Z10·Z15· R00·R07·R09·R12·R13·R14·R15· D01·D02·D03·D05·D07·D06·D10·D11·D12·D13·D16·D17·D19·D20·D23·D24·D31
C03	Z01·Z02·Z03·Z04·Z07·Z08·Z09·Z14· R01·R06·R10·R13·R14·R15· D00·D02·D05·D06·D08·D11·D12·D13·D17·D18·D19·D20·D21·D22·D23·D26·D28·D30· D31
C02	Z00·Z02·Z03·Z04·Z06·Z07·Z10·Z11·Z12· R03·R06·R07·R09·R14·R15· D00·D01·D03·D04·D05·D06·D11·D13·D15·D19·D21·D22·D24·D25·D26·D28·D29·D30
C01	Z01·Z02·Z03·Z05·Z06·Z09·Z10·Z11·Z15· R00·R05·R08·R12·R13· D00·D02·D03·D04·D05·D06·D07·D09·D12·D13·D14·D15·D18·D19·D21·D22·D25·D27· D28·D30
C00	Z00·Z02·Z05·Z09·Z11·Z12·Z13·Z14· R01·R02·R03·R04·R05·R09·R10·R11·R12·R14·R15· D00·D02·D05·D11·D12·D14·D15·D21·D22·D25·D30

FIG. 12

C15	Z01·Z04·Z06·Z10·Z11·Z12·Z13· D02·D03·D04·D05·D07·D11·D14·D16·D17·D19·D20·D22·D25·D27·D28·D33· D35·D36·D40·D44
C14	Z00·Z03·Z07·Z08·Z10·Z11·Z12· D03·D04·D05·D06·D08·D12·D15·D17·D18·D20·D21·D23·D26·D28·D29·D34· D36·D37·D41·D45
C13	Z02·Z06·Z08·Z09·Z10·Z11·Z15· D00·D04·D05·D06·D07·D09·D13·D16·D18·D19·D21·D22·D24·D27·D29·D30· D35·D37·D38·D42·D46
C12	Z01·Z05·Z07·Z08·Z09·Z10·Z14· D01·D05·D06·D07·D08·D10·D14·D17·D19·D20·D22·D23·D25·D28·D30·D31· D36·D38·D39·D43·D47
C11	Z00·Z01·Z06·Z07·Z09·Z10·Z11·Z12·Z15· D00·D03·D04·D05·D06·D08·D09·D14·D15·D16·D17·D18·D19·D21·D22·D23· D24·D25·D26·D27·D28·D29·D31·D32·D33·D35·D36·D37·D39
C10	Z00·Z05·Z06·Z08·Z09·Z10·Z11·Z14·Z15· D00·D01·D04·D05·D06·D07·D09·D10·D15·D16·D17·D18·D19·D20·D22·D23· D24·D25·D26·D27·D28·D29·D30·D32·D33·D34·D37·D36·D38·D40
C09	Z04·Z05·Z07·Z08·Z09·Z10·Z13·Z14·Z15· D00·D01·D02·D05·D06·D07·D08·D10·D11·D16·D17·D18·D19·D20·D21·D23· D24·D25·D26·D27·D28·D29·D30·D31·D33·D34·D35·D37·D38·D39·D41
C08	Z03·Z04·Z06·Z07·Z08·Z09·Z12·Z13·Z14· D01·D02·D03·D06·D07·D08·D09·D11·D12·D17·D18·D19·D20·D21·D22·D24· D25·D26·D27·D28·D29·D30·D31·D32·D34·D35·D36·D38·D39·D40·D42
C07	Z02·Z03·Z05·Z06·Z07·Z08·Z11·Z12·Z13· D02·D03·D04·D07·D08·D09·D10·D12·D13·D18·D19·D20·D21·D22·D23·D25· D26·D27·D28·D29·D30·D31·D32·D33·D35·D36·D37·D39·D40·D41·D43
C06	Z01·Z02·Z04·Z05·Z06·Z07·Z10·Z11·Z12· D03·D04·D05·D08·D09·D10·D11·D13·D14·D19·D20·D21·D22·D23·D24·D26· D27·D28·D29·D30·D31·D32·D33·D34·D36·D37·D38·D40·D41·D42·D44
C05	Z00·Z01·Z03·Z04·Z05·Z06·Z09·Z10·Z11· D04·D05·D06·D09·D10·D11·D12·D14·D15·D20·D21·D22·D23·D24·D25·D27· D28·D29·D30·D31·D32·D33·D34·D35·D37·D38·D39·D41·D42·D43·D45
C04	Z00·Z02·Z03·Z04·Z05·Z08·Z09·Z10·Z15·D00·D05·D06·D07·D10·D11·D12·D13· D15·D16·D21·D22·D23·D24·D25·D26·D28·D29·D30·D31·D32·D33·D34·D35· D38·D38·D39·D40·D42·D43·D44·D46
C03	Z01·Z02·Z03·Z04·Z07·Z08·Z09·Z14· D01·D06·D07·D08·D11·D12·D13·D14·D16·D17·D22·D23·D24·D25·D26·D27· D29·D30·D31·D32·D33·D34·D35·D36·D37·D39·D40·D41·D43·D44·D45·D47
C02	Z00·Z02·Z03·Z04·Z06·Z07·Z10·Z11·Z12· D03·D04·D05·D08·D09·D11·D12·D13·D15·D16·D18·D19·D20·D22·D23·D24· D26·D30·D31·D32·D34·D37·D38·D41·D42·D45·D46·
C01	Z01·Z02·Z03·Z05·Z06·Z09·Z10·Z11·Z15· D00·D04·D05·D06·D09·D10·D12·D13·D14·D16·D17·D19·D20·D21·D23·D24· D25·D27·D31·D32·D33·D35·D38·D39·D42·D43·D46·D47
C00	Z00·Z02·Z05·Z09·Z11·Z12·Z13·Z14· D01·D02·D03·D04·D06·D10·D13·D15·D16·D18·D19·D21·D24·D26·D27·D32· D34·D35·D39·D43·D47

FIG.13

C15	R01·R03·R04·R07·R08·R10·R11·R12·R13·R15·Z03·Z04·Z05·Z08·Z10·Z11·Z12·X01·X05·X06·X07·X09·X14·D00·D01·D02·D06·D09·D16·D19·D20·D23·D24·D26·D28
C14	R00·R02·R03·R06·R07·R09·R10·R11·R12·R14·R15·Z00·Z04·Z05·Z06·Z09·Z11·Z12·Z13·X00·X03·X05·X08·X09·X11·X12·X13·X14·D00·D03·D04·D05·D06·D07·D08·D11·D13·D15·D17·D18·D19·D24·D27·D28·D29·D30
C13	R01·R02·R05·R06·R08·R09·R10·R11·R13·R14·R15·Z00·Z01·Z02·Z06·Z07·Z09·Z10·Z11·X01·X04·X05·X06·X07·X08·X11·X12·X13·X15·D01·D03·D04·D09·D11·D14·D15·D18·D20·D21·D22·D23·D31
C12	R00·R01·R04·R05·R07·R08·R09·R10·R12·R13·R14·R15·Z00·Z01·Z02·Z03·Z04·Z05·Z08·Z11·Z13·Z15·X00·X03·X04·X05·X06·X07·X10·X11·X12·X14·D06·D09·D10·D11·D13·D15·D21·D22·D24·D26·D31
C11	R00·R01·R06·R09·R10·R14·Z00·Z01·Z04·Z06·Z07·Z08·Z15·X03·X04·X05·X06·X07·X11·X13·X14·X15·D02·D04·D05·D06·D07·D08·D10·D12·D16·D20·D21·D22·D23·D24·D25·D26·D28·D31
C10	R00·R05·R06·R08·R13·Z01·Z02·Z04·Z08·Z09·Z10·Z12·Z13·Z15·X02·X05·X09·X10·X11·X13·D00·D02·D03·D04·D06·D11·D14·D15·D16·D18·D18·D21·D22·D24·D26·D28·D31
C09	R04·R07·R08·R12·R15·Z02·Z03·Z05·Z09·Z10·Z11·Z13·Z14·X01·X04·X06·X09·X10·X12·D00·D01·D02·D04·D08·D10·D12·D13·D14·D16·D17·D19·D25·D26·D27·D28·D30
C08	R03·R06·R07·R11·R14·R15·Z03·Z04·Z06·Z10·Z11·Z12·Z14·Z15·X00·X04·X06·X07·X08·X12·X14·X15·D00·D01·D05·D07·D09·D15·D18·D21·D22·D24·D25·D26·D27·D29·D30
C07	R02·R05·R08·R10·R13·R14·R15·Z00·Z02·Z05·Z09·Z10·Z12·Z13·Z14·X01·X02·X03·X07·X10·X11·X13·X14·D00·D01·D02·D03·D04·D05·D06·D08·D09·D12·D13·D14·D15·D17·D19·D26·D28·D30
C06	R01·R04·R05·R09·R12·R13·R14·Z00·Z01·Z02·Z03·Z04·Z06·Z07·Z08·Z13·X00·X03·X04·X05·X06·X11·X13·X14·X15·D00·D02·D03·D04·D08·D11·D13·D16·D17·D20·D21·D22·D23·D24·D25
C05	R00·R03·R04·R08·R11·R12·R13·Z00·Z01·Z03·Z04·Z07·Z08·Z09·Z10·Z11·Z12·Z13·X01·X09·X11·X13·X15·D00·D02·D04·D05·D06·D17·D20·D23·D26·D27·D28·D29·D31
C04	R02·R03·R07·R10·R11·R12·R15·Z01·Z02·Z07·Z08·Z09·Z11·Z14·Z15·X00·X03·X04·X06·X08·X09·X10·X11·D01·D03·D04·D09·D11·D14·D15·D18·D20·D21·D22·D23·D31
C03	R01·R02·R06·R09·R10·R11·R14·Z00·Z02·Z03·Z04·Z05·Z07·Z08·Z09·Z13·X02·X04·X05·X08·X07·X06·X10·X11·X12·X14·X15·D00·D02·D03·D12·D13·D14·D15·D16·D24·D26·D27·D28·D29·D30·D31
C02	R00·R03·R04·R05·R07·R09·R11·R12·Z00·Z01·Z02·Z04·Z06·Z07·Z10·Z12·Z15·X01·X02·X05·X09·X12·X13·X14·D00·D01·D02·D03·D04·D05·D09·D12·D18·D20·D23·D25·D30·D31
C01	R02·R03·R04·R06·R08·R10·R11·R15·Z01·Z03·Z07·Z06·Z09·Z12·Z14·X00·X02·X03·X05·X08·X09·X10·X13·X14·X15·D02·D03·D04·D07·D08·D09·D10·D11·D12·D14·D15·D17·D18·D19·D25·D26·D27·D28·D29·D31·
C00	R02·R04·R05·R09·R09·R11·R12·R13·R14·Z02·Z03·Z04·Z07·Z09·Z10·Z11·X02·X04·X05·X06·X08·X12·X13·D01·D05·D08·D09·D11·D12·D13·D16·D17·D18·D21·D22·D24·D30·D31

FIG.14

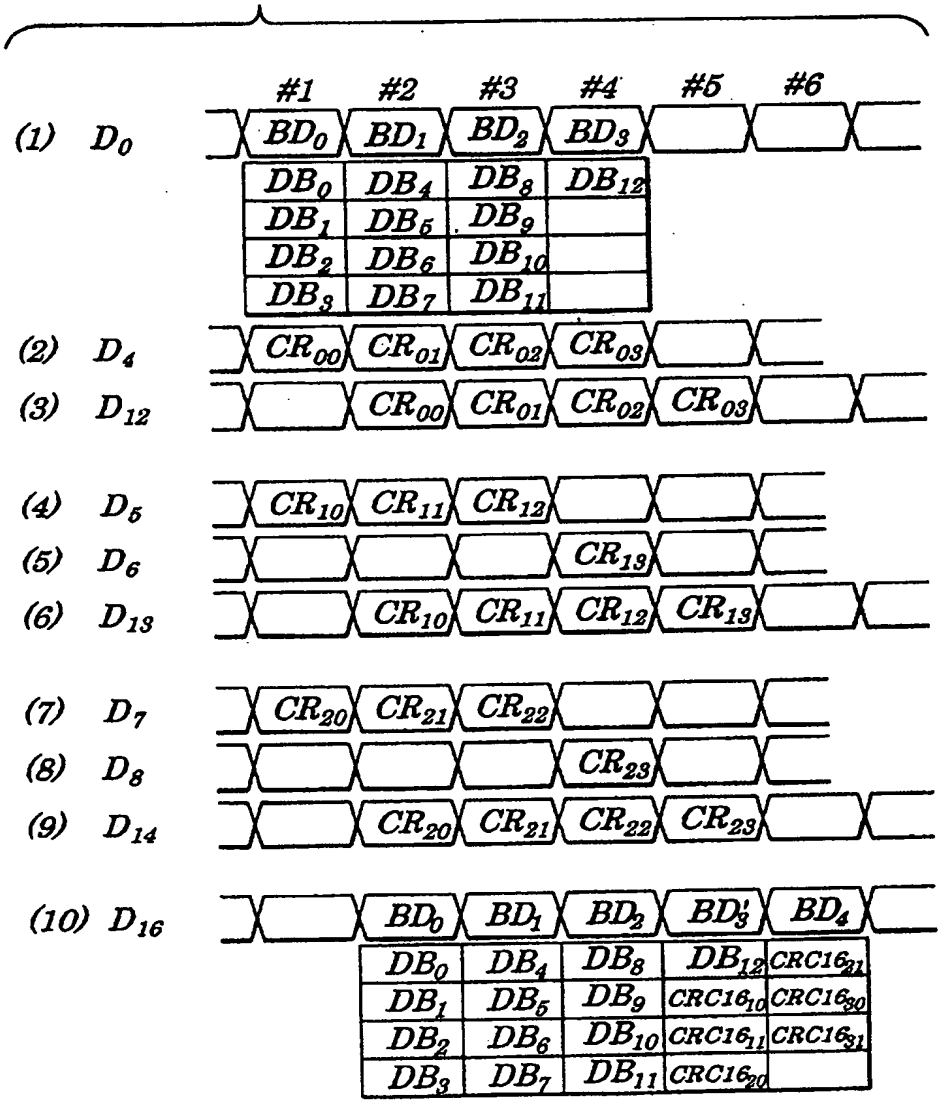
#1 #2 #3 #4 #5 #6
(1) D_0
BD_0 BD_1 BD_2 BD_3
DB_0 DB_4 DB_8 DB_{12}
DB_1 DB_5 DB_9
DB_2 DB_6 DB_{10}
DB_3 DB_7 DB_{11}
(2) D_4
CR_{00} CR_{01} CR_{02} CR_{03}
(3) D_{12}
CR_{00} CR_{01} CR_{02} CR_{03}
(4) D_5
CR_{10} CR_{11} CR_{12}
(5) D_6
CR_{13}
(6) D_{13}
CR_{10} CR_{11} CR_{12} CR_{13}
(7) D_7
CR_{20} CR_{21} CR_{22}
(8) D_8
CR_{23}
(9) D_{14}
CR_{20} CR_{21} CR_{22} CR_{23}
(10) D_{16}
BD_0 BD_1 BD_2 BD_3 BD_4
DB_0 DB_4 DB_8 DB_{12} $CRC16_{21}$
DB_1 DB_5 DB_9 $CRC16_{10}$ $CRC16_{30}$
DB_2 DB_6 DB_{10} $CRC16_{11}$ $CRC16_{31}$
DB_3 DB_7 DB_{11} $CRC16_{20}$

FIG. 15 (PRIOR ART)

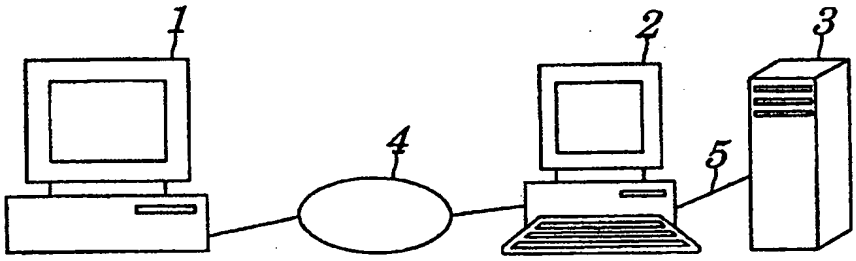

FIG. 16 (PRIOR ART)

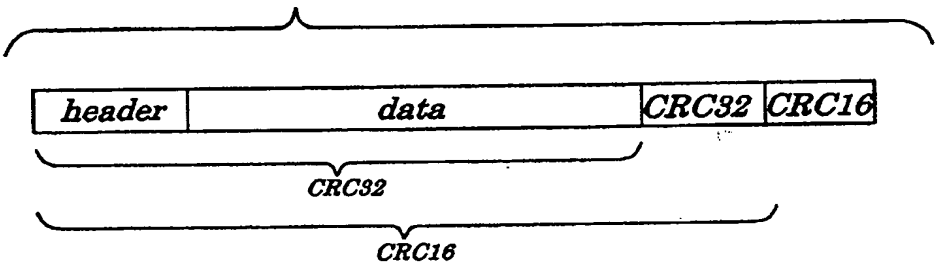

FIG. 17 (PRIOR ART)

one byte

#1	DB_0	DB_1	DB_2	DB_3
#2	DB_4	DB_5	DB_6	DB_7
#3	DB_8	DB_9	DB_{10}	DB_{11}
⋮				
#k-2	DB_{n-5}	DB_{n-4}	DB_{n-3}	DB_{n-2}
#k-1	DB_{n-1}	DB_n	$CRC32_0$	$CRC32_1$
#k	$CRC32_2$	$CRC32_3$	$CRC16_0$	$CRC16_1$

FIG. 18 (PRIOR ART)

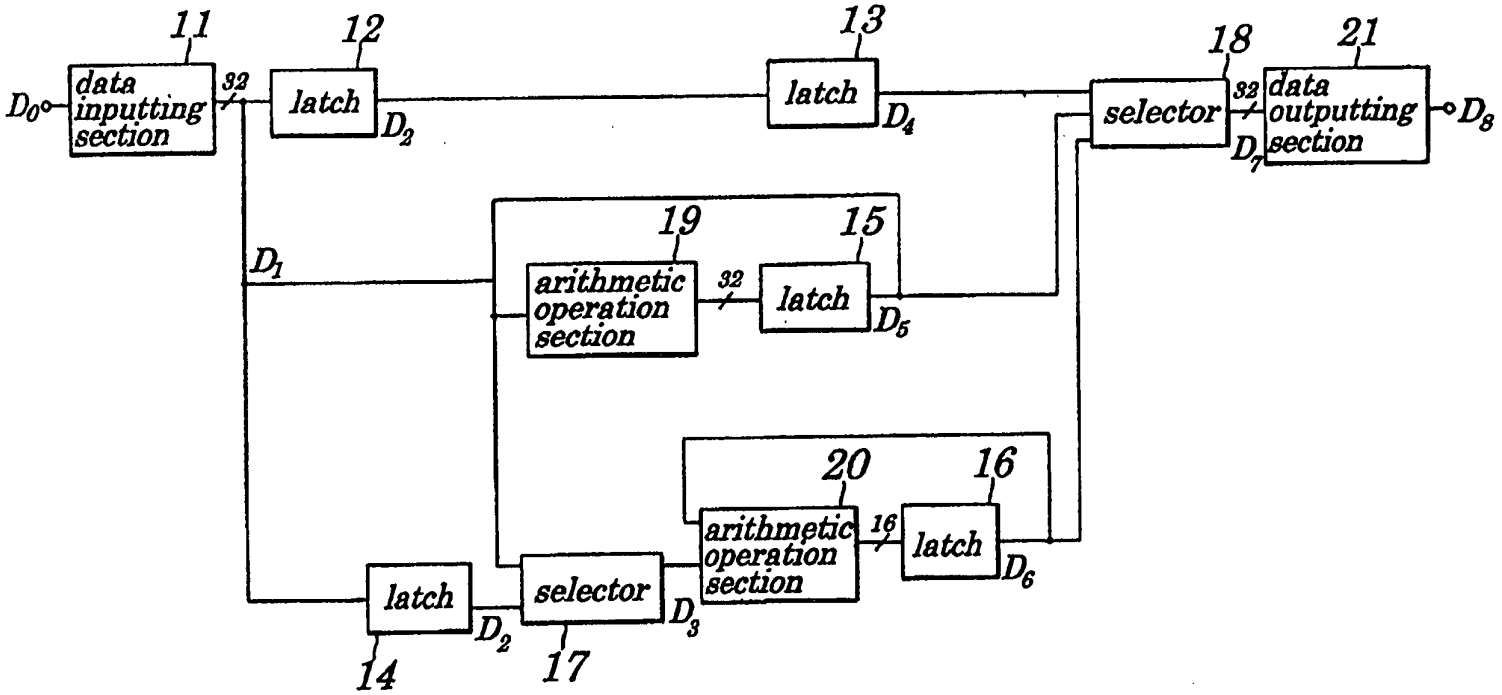

FIG.19 (PRIOR ART)

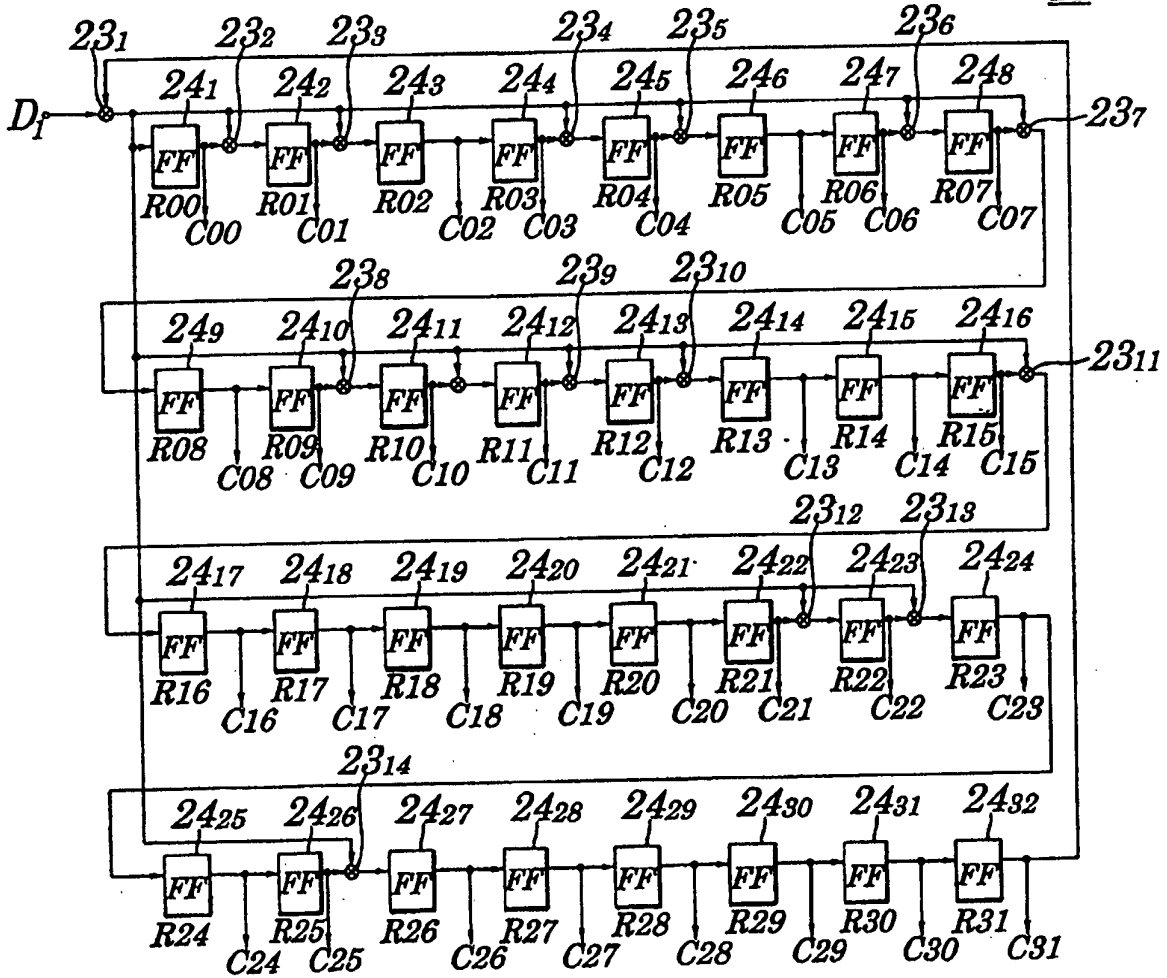

FIG.20 (PRIOR ART)

C31	R05·R08·R09·R11·R15·R23·R24·R25·R27·R28·R29·R30·R31· D00·D01·D02·D03·D04·D06·D08·D16·D20·D22·D23·D26
C30	R04·R07·R08·R10·R14·R22·R23·R24·R26·R27·R28·R29·R30· D01·D02·D03·D04·D05·D07·D08·D09·D17·D21·D23·D24·D27
C29	R03·R06·R07·R09·R13·R21·R22·R23·R25·R26·R27·R28·R29·R31· D00·D02·D03·D04·D05·D06·D08·D09·D10·D18·D22·D24·D25·D28
C28	R02·R05·R06·R08·R12·R20·R21·R22·R24·R25·R26·R27·R28·R30· D01·D03·D04·D05·D06·D07·D09·D10·D11·D19·D23·D25·D26·D29
C27	R01·R04·R05·R07·R11·R19·R20·R21·R23·R24·R25·R26·R27·R29· D02·D04·D05·D06·D07·D08·D10·D11·D12·D20·D26·D27·D30
C26	R00·R03·R04·R06·R10·R18·R19·R20·R22·R23·R24·R25·R26·R27·R28· R31·D00·D03·D05·D06·D07·D08·D09·D11·D12·D13·D21·D25·D27·D28·D31
C25	R02·R03·R06·R11·R15·R17·R18·R19·R21·R22·R28·R29·R31· D00·D02·D03·D09·D10·D12·D13·D14·D16·D20·D23·D28·D29
C24	R01·R02·R07·R10·R14·R16·R17·R18·R20·R21·R27·R28·R30· D01·D03·D04·D10·D11·D13·D14·D15·D17·D21·D24·D29·D30
C23	R00·R01·R06·R09·R13·R15·R16·R17·R19·R20·R26·R27·R29·R31· D00·D02·D04·D05·D11·D12·D14·D15·D16·D18·D22·D25·D30·D31
C22	R00·R09·R11·R12·R14·R16·R18·R19·R23·R24·R26·R27·R29·R31· D00·D02·D04·D05·D07·D08·D12·D13·D15·D17·D19·D20·D22·D31
C21	R05·R09·R10·R13·R17·R18·R22·R24·R26·R27·R29·R31· D00·D02·D04·D05·D07·D09·D13·D14·D18·D21·D22·D28
C20	R04·R08·R09·R12·R16·R17·R21·R23·R25·R26·R28·R30· D01·D03·D05·D06·D08·D10·D14·D15·D19·D22·D23·D27
C19	R03·R07·R08·R11·R15·R16·R20·R22·R24·R25·R27·R29· D02·D04·D06·D07·D09·D11·D15·D16·D20·D23·D24·D28
C18	R02·R06·R07·R10·R14·R15·R19·R21·R23·R24·R26·R28·R31· D00·D03·D05·D07·D08·D10·D12·D16·D17·D21·D24·D25·D29
C17	R01·R05·R06·R09·R13·R14·R18·R20·R22·R25·R27·R30·R31· D00·D01·D04·D06·D08·D09·D11·D13·D17·D18·D22·D25·D26·D30
C16	R00·R04·R05·R08·R12·R13·R17·R19·R21·R22·R24·R26·R29·R30· D01·D02·D05·D07·D09·D10·D12·D14·D18·D19·D23·D26·D27·D31

FIG.21 (PRIOR ART)

C15	R03·R04·R05·R07·R08·R09·R12·R15·R16·R18·R20·R21·R24·R27·R30· D01·D04·D07·D10·D11·D13·D15·D16·D19·D22·D23·D24·D26·D27·D28
C14	R02·R03·R04·R06·R07·R08·R11·R14·R15·R17·R19·R20·R23·R26·R29· D02·D05·D08·D11·D12·D14·D16·D17·D20·D23·D24·D25·D27·D28·D29
C13	R01·R02·R03·R05·R06·R07·R10·R13·R16·R19·R22·R26·R31· D00·D03·D06·D09·D12·D13·D15·D17·D18·D21·D24·D25·D26·D28·D29·D30
C12	R00·R01·R02·R04·R05·R06·R09·R12·R13·R15·R17·R18·R24·R30·R31· D00·D01·D04·D07·D10·D13·D14·D16·D18·D19·D22·D25·D26·D27·D29·D30· D31
C11	R00·R01·R03·R04·R09·R12·R14·R15·R16·R17·R20·R24·R25·R26·R27·R 28·R31·D00·D03·D04·D05·D06·D07·D11·D14·D15·D16·D17·D19·D22·D27· D28·D30·D31
C10	R00·R02·R03·R05·R09·R13·R14·R16·R19·R26·R28·R29·R31· D00·D02·D03·D05·D12·D15·D17·D18·D22·D26·D28·D29·D31
C09	R01·R02·R04·R05·R09·R11·R12·R13·R18·R23·R24·R29· D02·D07·D08·D13·D16·D19·D20·D22·D26·D27·D29·D30
C08	R00·R01·R03·R04·R06·R10·R11·R17·R22·R28·R31· D00·D03·D08·D09·D14·D19·D20·D21·D23·D27·D28·D30·D31
C07	R00·R02·R03·R05·R07·R08·R10·R15·R16·R21·R22·R23·R24·R28·R29· D02·D03·D06·D07·D08·D09·D10·D15·D16·D21·D23·D24·D26·D28·D29·D31
C06	R01·R02·R04·R05·R06·R07·R08·R11·R20·R21·R25·R30· D01·D02·D06·D09·D10·D11·D17·D20·D23·D24·D25·D26·D27·D29·D30
C05	R00·R01·R03·R04·R05·R06·R07·R10·R13·R19·R20·R21·R24·R28·R29· D02·D03·D07·D10·D11·D12·D18·D21·D24·D25·D26·D27·D28·D30·D31
C04	R00·R02·R03·R04·R06·R08·R11·R12·R15·R18·R19·R20·R24·R26·R29· R30·R31·D00·D01·D02·D06·D07·D11·D12·D13·D16·D19·D20·D23·D25·D27· D28·D29·D31
C03	R01·R02·R03·R07·R08·R09·R10·R14·R15·R17·R18·R19·R25·R27·R31· D00·D04·D06·D12·D13·D14·D16·D17·D21·D22·D23·D24·D26·D29·D30
C02	R00·R02·R08·R07·R08·R09·R13·R14·R16·R17·R18·R24·R26·R30·R31· D00·D01·D05·D07·D13·D14·D15·D17·D18·D22·D23·D24·D25·D29·D30·D31
C01	R00·R01·R06·R07·R09·R11·R12·R13·R16·R17·R24·R27·R28· D03·D04·D07·D14·D15·D18·D19·D20·D22·D24·D25·D30·D31
C00	R00·R06·R09·R10·R12·R16·R24·R25·R26·R28·R29·R30·R31· D00·D01·D02·D03·D05·D06·D07·D15·D19·D21·D22·D25·D31

FIG.22 (PRIOR ART)

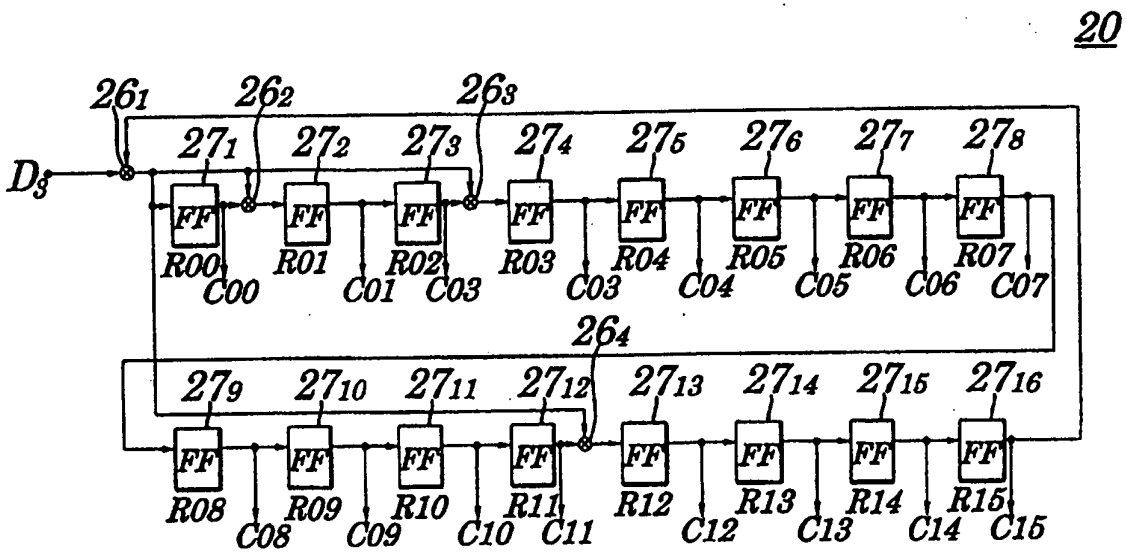

FIG.23 (PRIOR ART)

C15	R03·R04·R06·R09·R11·R12·R14·R15· D00·D01·D03·D04·D06·D09·D11·D12·D17·D19·D20·D24·D28
C14	R02·R03·R05·R08·R10·R11·R13·R14· D01·D02·D04·D05·D07·D10·D12·D13·D18·D20·D21·D25·D29
C13	R01·R02·R04·R07·R09·R10·R12·R13·R15· D00·D02·D03·D05·D06·D08·D11·D13·D14·D19·D21·D22·D26·D30
C12	R00·R01·R03·R06·R08·R09·R11·R12·R14· D01·D03·D04·D06·D07·D09·D12·D14·D15·D20·D22·D23·D27·D31
C11	R00·R02·R03·R04·R05·R06·R07·R08·R09·R10·R12·R13·R14·R15· D00·D01·D02·D03·D05·D06·D07·D08·D09·D10·D11·D12·D13·D15·D16·D17· D19·D20·D21·D23
C10	R01·R02·R03·R04·R05·R06·R07·R08·R09·R11·R12·R13·R14·R15· D00·D01·D02·D03·D04·D06·D07·D08·D09·D10·D11·D12·D13·D14·D16·D17· D18·D20·D21·D22·D24
C09	R00·R01·R02·R03·R04·R05·R06·R07·R08·R10·R11·R12·R13·R14·R15· D00·D01·D02·D03·D04·D05·D07·D08·D09·D10·D11·D12·D13·D14·D15·D17· D18·D19·D21·D22·D23·D25
C08	R00·R01·R02·R03·R04·R05·R06·R07·R09·R10·R11·R12·R13·R14· D01·D02·D03·D04·D05·D06·D08·D09·D10·D11·D12·D13·D14·D15·D16·D18· D19·D20·D22·D23·D24·D26
C07	R00·R01·R02·R03·R04·R05·R06·R08·R09·R10·R11·R12·R13· D02·D03·D04·D05·D06·D07·D09·D10·D11·D12·D13·D14·D15·D16·D17·D19· D20·D21·D23·D24·D25·D27
C06	R00·R01·R02·R03·R04·R05·R07·R08·R09·R10·R11·R12· D03·D04·D05·D06·D07·D08·D10·D11·D12·D13·D14·D15·D16·D17·D18·D20· D21·D22·D24·D25·D26·D28
C05	R00·R01·R02·R03·R04·R06·R07·R08·R09·R10·R11· D04·D05·D06·D07·D08·D09·D11·D12·D13·D14·D15·D16·D17·D18·D19·D21· D22·D23·D25·D26·D27·D29
C04	R00·R01·R02·R03·R05·R06·R07·R08·R09·R10·R15· D00·D05·D06·D07·D08·D09·D10·D12·D13·D14·D15·D16·D17·D18·D19·D20· D22·D23·D24·D26·D27·D28·D30
C03	R00·R01·R02·R04·R05·R06·R07·R08·R09·R14·R15· D00·D01·D06·D07·D08·D09·D10·D11·D13·D14·D15·D16·D17·D18·D19·D20· D21·D23·D24·D25·D27·D28·D29·D31
C02	R00·R01·R05·R07·R08·R09·R11·R12·R13·R15· D00·D02·D03·D04·D06·D07·D08·D10·D14·D15·D16·D18·D21·D22·D25·D26· D29·D30
C01	R00·R04·R06·R07·R08·R10·R11·R12·R14·R15· D00·D01·D03·D04·D05·D07·D08·D09·D11·D15·D16·D17·D19·D22·D23·D26· D27·D30·D31
C00	R04·R05·R07·R10·R12·R13·R15· D00·D02·D03·D05·D08·D10·D11·D16·D18·D19·D23·D27·D31

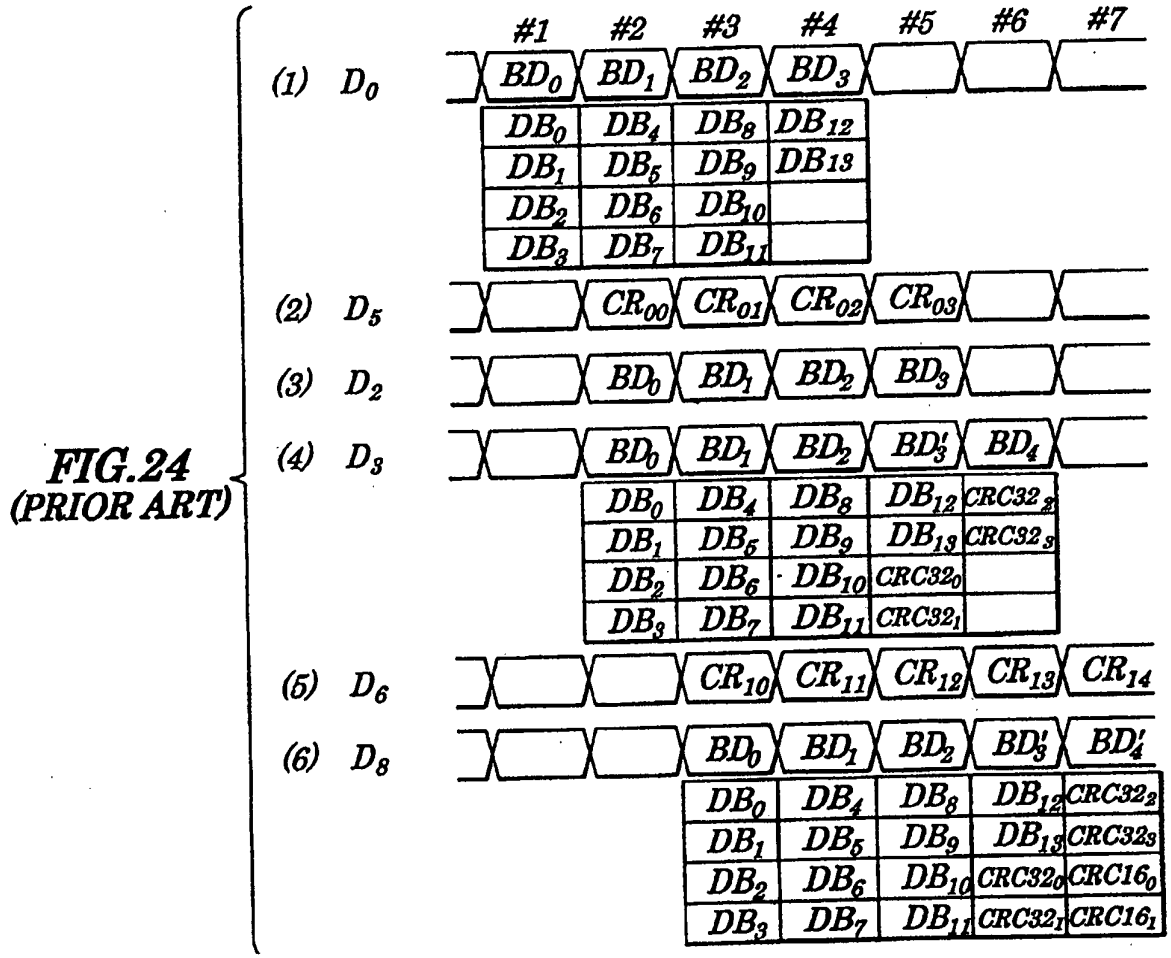

FIG.24
(PRIOR ART)